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(54) **REAGENT REFRIGERATOR**

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See application file for complete search history.

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(57) **ABSTRACT**

The present invention relates to a reagent refrigerator which comprises a reagent refrigerator compartment including reagent storing trays; an upper housing a cooling equipment compartment and a cooling purification compartment; a side duct defined by a side partition having a through hole at the side of the reagent refrigerator; one each of a second side duct, separately defined by a side partition having a through hole at the other side thereof, and a rear duct, separately defined by a rear partition having a through hole at the rear side thereof; and an upper duct having one end communication with the upper portion of the second side or rear side, and the other end communicating with the cooling purification compartment. Accordingly, refrigeration temperature of the reagent refrigerator can be controlled, and circulation flow in the reagent refrigerator is improved, to thereby purify the air therein and minimize deviations from refrigerator temperature values. In addition, since the reagent refrigerator is based on a closed circulation type structure, impurities are prevented from being introduced to the reagent refrigerator to thereby increase the service life of the filter and reduce energy consumption. Moreover, even when the door of the reagent refrigerator is opened, negative pressure distribution in the reagent refrigerator is relatively even, thereby preventing the emission of noxious gas and an offensive smell from the reagent refrigerator compartment to the indoor space. More particularly, the reagent refrigerator may be modified to have a partial opening circulation structure without a heater to thereby prevent explosions and to perform a defrosting/dehumidifying operation so that safety and economic feasibility can be improved. In addition, the reagent refrigerator can be automatically controlled and the internal condition of the reagent refrigerator compartment can be monitored in real time. Furthermore, not only can on-site/real-time control be executed, but remote control as well.

18 Claims, 7 Drawing Sheets

